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Happy 2008,

It’s great to welcome you to a new year, one that’s sure to show continuing growth and innovation involving the ASTG. I’d like to focus my chair’s column on the upcoming midyear meeting—a first for the ASTG. We will be co-sponsoring a midyear meeting on “Human Factors and NextGen: The Future of Aviation” with Division 21 of the American Psychological Association and with the Federal Aviation Administration.

The midyear meeting will take place in the Dallas-Fort Worth area, an easy destination for most air travelers, on May 28th and 29th. More specifically, the conference will take place on the campus of the University of Texas at Arlington. It will be a single track conference kicked off by a keynote address from Terry Allard, head of human factors for the FAA, early on the morning of the 28th. Other speakers from government, academia, industry, and the airlines will be featured. In addition, ASTG members are encouraged to participate: come for the discussion, submit an oral presentation, or contribute a poster. The single track format will feature time for discussion with the speakers and with each other. We hope to bring together those interested in doing human factors research on NEXTGEN-relevant issues with those responsible for funding and delivering human factors answers to complex NEXTGEN questions; we hope to give attendees a serious amount of time to discuss these complex issues.

The call will be out soon, which will require that your proposals be returned by April.

ASTG members can save $100 off of registration: members pay a nominal $150 that includes two lunches and a copy of the proceedings. We’re looking at publishers now who will agree to produce a volume. If you have colleagues who aren’t members, they can either join ASTG (smart move) and pay the $150 or register as a non-member for $250. Agreements have been reached with local hotels: The Marriott TownPlace and SpringHill Suites--Arlington (both on Lamar Blvd.) will offer full complimentary breakfast and a Wednesday night social for room rates of $105 per night. The hotels will set up a website soon for people to register at the conference rate. When registering, please indicate that you will be attending the NEXTGEN conference. The HFES website will handle registration for the conference. We’ll send information about the URLs soon through the TG’s listserv.

We’re also looking at something new: remote attendance. Our plan, if we can implement it, is to charge $30 registration for remote attendees: you can attend the conference through the internet on your PC. You’ll get voice-over PowerPoint presentations and if we’re successful, you may even be able to ask questions of the speaker remotely. We still are working out some details, but if you want to have contact with the issues but don’t care to press the flesh with the NEXTGEN principals, remote registration may be the way to go.

So, this column is just a notice of more informative emails that will be coming your way about the conference. Look for more details about the conference registration URL, the hotel registration URL, and an email announcing the details of the call for proposals. So, until Texas in May, yippee Ky Yi Yea…

Fly safely,
Frank Durso
Chair, ASTG
Stan Roscoe Remembered

Submitted by Dennis Beringer

At the end of 2007 we lost a good friend, mentor, and uncompromising empiricist, Stanley Nelson Roscoe. If you are interested in the facts of what Stan did during his life, an obituary will appear in the January issue of the HFES Bulletin. I don’t want to repeat that here, but rather, I’d like to reflect on what Stan did for us, how the world is different because he was here, and who Stan was beyond the published articles, the experiments, and the written documents.

When I started taking stock of what I had on hand about Stan, it was almost overwhelming. I don’t think there’s a room in the house or a place in the office where there isn’t something that serves as a reminder. I found this note, written in Stan’s impeccable cursive, on a sheet from a University of Illinois note pad, in the pages of the O’Hare and Roscoe book: “Frank called – Breakfast at Denny’s 6:30am” (at NMSU, circa 1986). Which, of course, reminded me of our numerous forays about town in search of great rellenos, and of Stan’s “killer margaritas” as we called them. That era was after retirement number two, so perhaps we need to go back a ways and recall some of the earlier things.

Stan was quite uncompromising when it came to accuracy in speaking and writing, an attitude derived, no doubt, from his speech and English major from Humboldt State College, which he “painfully inflicted” upon those of us who had the good fortune of being his students (Stan’s own words). I can recall my first HFES meeting in Huntsville, Alabama in 1974. Stan made us assemble in his room before our times to present and rehearse our presentations until we were on time and didn’t leave out anything of importance. We were warned not to split infinitives and not to replace adverbs with adjectives. Where are we today as a result of this?

Well, there’s good news and bad news. Most of those people who were Stan’s students give pretty good talks and can write a decent paper when called to do so (6 that I know of are now Fellows of HFES). I had to read the scripture at church today and actually got compliments from some other members of the praise band on that reading (good); however, I have ventured to correct my wife’s grammar on a few occasions (bad). Luckily Stan nurtured our abilities to learn, and I’m still learning what NOT to do with what he taught me.

Stan loved displays of all varieties, and you can trace this back to his “Flight by Periscope” study in the early 1950s, one of the early attempts to determine what happens when pilots try to use virtual imaging displays that can magnify or minify the outside world (Figure 1). He contributed to the design of controls and displays for the F-102 during his career at Hughes (Figure 2). When Stan left Hughes to go back to U. of I., the group gave him a nice book of photos and a hilarious rewriting of “’twas the night before Christmas” with Stan as the central character. Let me know if you want to read this – “it’s a hoot” as Stan would say. He kept up the display work with “What moves, the airplane or the world?” (our test aircraft is shown in Figure 3) and various other examinations of aircraft displays. While he was at New Mexico State University he designed a pretty slick display for helicopter station keeping and for following curvilinear flight paths and landing. I didn’t come to appreciate just how slick it was until I became a helicopter pilot at the age of 54 and went back to Stan to ask him to find the code for that display. He was also very interested in “the eyeball” as he would often say and spent some time looking at visual accommodation and misperce...
Message from the Editor

Happy New Year everyone! 2008 is going to be a great year for the ASTG newsletter. I’m planning to make the newsletter more visually inviting this year by adding pictures and trying to make the newsletter a little less text-heavy. You got a taste with the Fall issue, and I think it worked well – you’ll be seeing more of that in 2008. I’d also like to point out a special article that I’ve included regarding the passing of Stan Roscoe, a valuable member of the Aviation Human Factors community. Please take a moment to read over the article and remember Stan. Even if you did not know Stan personally, Dennis Beringer wrote a great tribute that I’m sure you’ll enjoy. As always, please e-mail me with comments, criticisms, and suggestions! You will find that I’m very responsive to suggestions. You can e-mail me any time at jbarrow1@gmu.edu. So, enjoy the beginnings of 2008, the lingering holiday spirit, and the Winter issue of the ASTG newsletter!

Regards,
Jane Barrow

Call for Proposals

Submitted by Amy Alexander

The Aerospace Systems Technical Group invites you to submit proposals for the 52nd Annual HFES Meeting, which will be held September 22-26, 2008, at the New York Marriott Marquis Times Square in New York, NY. The Call for Proposals is now available at http://www.hfes.org/web/HFESMeetings/08CallforProposals.html. Here are the key dates to mark in your calendars:

January 28: Proposals (all presentation types) due
March 21: Accept/reject letters sent
May 26: Proceedings papers due

Submissions are welcome in any area related to aerospace systems. Please feel free to be creative in thinking about the appropriate format of your submission as the national office is encouraging the use of alternative formats. Participants are invited to submit proposals including case studies, debates, demonstrations, competitive product designs, new methodologies, on-site experiments, and posters involving both fixed and dynamic information presentation.

All proposals must conform to the requirements in the 2008 Call for Proposals. Please read it carefully prior to submitting your work, and let me know if you have any questions or concerns. Note that HFES is seeking five-page proposals, which must be formatted in the same two-column layout that is used for papers published in the proceedings. There is an absolute five-page limit, with no restrictions on word count.

Continued on page 5
Call for Proposals Con’t.

Detailed layout instructions for each presentation type are included in the Call for Proposals.


Every existing user in the submission/reviewer database should have received an email providing his/her username and password -- contact HFES2008@mirasmart.com if you have any issues logging in to the Mira system.

The number of sessions and distribution of sessions among Technical Groups are fully determined by the number of submissions – please select the Aerospace Systems Technical Group when submitting your proposals for the 2008 conference.

I am also looking for people to review submissions. If you are willing to serve in this capacity, please contact me at aalexander@aptima.com. Otherwise, I soon may be contacting you!

I am looking forward to receiving all of your submissions!

APA Division 21 Membership Call and Logo Contest

Submitted by Dan Morrow

Interested in applying experimental psychology to real world issues? Consider joining the Division of Applied Experimental and Engineering Psychology (Division 21 of APA). Members work in industry, government, and academia, with diverse interests related to safe and effective performance in living and work environments, analysis and design of communication systems in health care, transportation, and other domains, and other topics relevant to members of Division 38. Joining Div21 provides many benefits: a) opportunities to interact with like-minded colleagues, both at the annual APA meetings (including a social event at neighborhood restaurant on the Division) and at a midyear meeting; b) annual awards for outstanding contribution to Applied Experimental Psychology, early career achievement, and best dissertation; c) subscription to the APA Journal of Experimental Psychology: Applied; and d) a mentoring program for students and fledgling professionals. To join Div21, go to http://www.apa.org/about/division/memapp.html. Dues are only $32, whether you join through APA or as an affiliate ($15 for students), so join today!

Additionally, Division 21 is holding a logo contest to determine the new symbol for Division 21! Win the distinction of your byline credit on the logo by submitting the winning logo. The winner(s) will be announced at the 208 midyear meeting. Send your entries to Dan Morrow at dgm@uiuc.edu or Mary Gregerson at mary.gregerson@us.army.mil. Be sure to submit your entries by February 15, 2008. For more information, please see http://www.apa.org/divisions/div21/. We look forward to receiving your submissions!
Stan was also quite a wit, and was heard to have made the following remarks:

Referring to a poor experimental design: “That experimental design was pessimized.”
In the closing of a letter: “Thine to a cinder.”
Of his skill at billiards: “The sign of a misspent youth.”
On experimentation: “A good experimentalist should know how the thing’s going to turn out before he collects any data at all.”

Then there were the things he left us in writing:
Written as an inscription in my copy of the first edition of Aviation Psychology: “To Dennis, who liked graduate school so much he considered making a career of it.”

A Groucho-like comment from “Galilean and the Marketing manager”: “The manager of marketing was beside himself and often beside the investigator.”

And then there were the memorable paper and chapter titles:
“When day is done and shadows fall, we miss the airport most of all.”
“The perversity of animate subjects.”
“Plumbing the lower limits of competency.”

Stan also liked to claim some original terms contributed to the field:
“area navigation”
“behavioral engineering”
“volumetric navigation” (3-D)
“tempero-volumetric navigation” (Roscoe and Beringer, 1990)

Stan had quite a sense of humor, and was not beneath using it to great effect. One Halloween in Champaign-Urbana he attended a party dressed as Farah Fawcett’s mother (yes, there is a photo; no, you can’t see it). For a talk about flight simulation he had me record an organ rendition of “Bringing in the Sheeves” (we called it “Bringing in the sheep”– but that is yet another pun related to herding people into believing the illusion created by a flight simulator) which he played in the background of his talk whilst wearing his preacher garb; the music then segued into “It’s only a paper moon.” Oh, let’s not forget the slide he showed at the same time that apparently depicted a stained-glass window – as the camera pulled back on subsequent slides, you could see that it was stained glass in the windscreens of a flight simulator… Sometimes Stan was on the receiving end of the humor, as seen in
limitations has run out, so I can tell you), that Stan and Chuck Hopkins, being “starving” graduate students at the University of Illinois, “borrowed” sweet corn from the Morrow Experimental Agricultural Plots at the University of Illinois, thus possibly imperiling the outcome of yield experiments, to which Stan remarked, “Perhaps they should have protected the experimental design with an electric fence.”

The second episode was from the days at New Mexico State University. Stan got an office in a windowless cinder-block former dormitory at NMSU. He couldn’t stand not having a window. He knew a fellow at the physical plant who had just gotten a new concrete saw. Stan called the fellow and asked him to come over and try it out by cutting a hole in a wall. The fellow came over and cut a perfect picture-window sized hole. Stan then called the university architect, as I was told, and said that he had a hole in his wall and needed a window in it. I had the office across the hall from Stan in that lab; he had a window, and I didn’t (Figure 5)

One more – there was the infamous mailbox incident when I first arrived at the Behavioral Engineering Lab at NMSU. I had just dumped my things in the office across from Stan and found that I didn’t have a mail slot amongst the little pigeon-hole steel mail slots that everyone there used. I remarked to Stan and to Darlene and Don Couchman that I didn’t have a mailbox and needed one. The next morning I found a black-steel rural mailbox with the flag up screwed to the wall outside my office, and the name “El Queso Grande” (The Big Cheese) affixed to my door. Whether Stan was or was not directly involved, he probably both inspired and encouraged the effort.

Remembering Stan cannot go without some reference to his fishing, which he pursued with great vigor throughout his life. I finally got him to go with me and a friend to Lake Texoma for striped bass (Stan had taught me the finer points of fishing for other varieties of bass at Hemlock Lake in Indiana) after the 2005 ISAP meeting here. Well, as luck would have it, the fishing was probably the worst we’d seen in years. However, Stan wasn’t skunked and managed to hook a few, albeit small (Figure 6). As he held up the little tyke for me to photograph, all completely tongue-in-cheek, he said, “Well, Dennis, this little fellow is hardly bigger than the lure!” Yes, Stan also played “fish horn” (soprano sax) with some distinction, but that’s a different kind of fish story.

At the HFES 50th Anniversary meeting in San Francisco, we gathered the Alpha and the Omega, Stan’s first and last students, for a group photo (Figure 7). Larry Scanlan was Stan’s first Ph.D. student at the University of Illinois. Hector Acosta was Stan’s last Ph.D. student at New Mexico State University. It was very much a homecoming and a gathering of family. Stan had been there at the beginning of what started as the HFS, participating in writing the articles of incorporation for the society, and here we all were 50 years later.

At the first “official” meeting, there were about 100 attendees. At my first meeting in 1974, Stan and Bob Williges had been there and had known everyone at

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the meeting by name. Now we have more people in the ASTG than were at the original meeting in Tulsa, and have almost 5,000 members in the society, with numerous technical groups and a wide breadth of topical interest and coverage far beyond what was envisioned at the inception of the organization.

What Stan did for us is difficult to contain in mere words (recall Stan’s paper, “Words, words, words.”). However, they are all we have as psychologists, so here goes. Stan gave us solid empirical research and helped set the tone for Aviation Psychology for some time. He made us appreciate preciseness in word, wit, and phrase. He tried to get us to see when to be serious about a research topic and when not to take ourselves too seriously. He plunged into research areas if he thought there was something to be gained and wasn’t afraid to spark a debate as he believed that it was in the debate that the facts would emerge. He taught us a great deal about generosity (he always had a room ready for a weary visitor – sometimes for months, and he was quick to give something to anyone who had a perceptible need – beds, fishing rods, whatever). What Stan did for us was to give us guidelines by which to live our lives, both on the job and off. Hopefully someday soon I’ll see Frank again at Denny’s for breakfast and we’ll recall when Stan was there, the rellenos and killer margaritas, and all the good times. We may even drop by the old Wells Hall to see the view of the Organ Mountains from Stan’s picture window. We might even see Stan flying by in a flight simulator if we look hard enough…

Student Paper Award Requirements

Submitted by Emily Stelzer

Proposals for the HFES annual meeting are due in late January, and it’s time to encourage our student members to take part in this event. To reward the quality technical work of our student members, the ASTG will review student submissions and present one winner with the Student Paper award at the Annual Meeting in New York.

To be eligible for the award, the submitted work must be conducted primarily by the student, the student must be enrolled at a college or university at the time of the submission, and the student must be a member of the ASTG. Because the committee will evaluate both the paper and presentation to select the winner, students must submit an accepted proceedings paper and must present the work at the annual meeting to be eligible for the award.

Nominations are not solicited for this award. Students can designate their eligibility for the award when electronically submitting their final paper to the HFES website.

The awards committee will select both presentation and poster submissions as finalists. Finalists will have their 51st Annual Meeting registration fees waved and will be recognized at the ASTG meeting. From the finalists, winner(s) will be selected and presented with a certificate and a monetary award.
Upcoming Events

Each issue of the Flyer will feature a schedule of upcoming meetings, linked to a relevant webpage where applicable. If there is a meeting you would like to see highlighted here that is not included, please email jbarrow1@gmu.edu with the event name, date, location, and link if applicable.

January


February

February 3-8, 2008 – 33rd Interdisciplinary Conference, Jackson Hole, WY http://aris.ss.uci.edu/HIPLab/AIC/

February 4-7, 2008 – SAE G-10, Melbourne, FL dlloyd@saee.org

February 12-13, 2008 – AHS CBM Specialist’s Meeting, Huntsville, AL http://www.vtol.org/


February 12-14, 2008 – The World Air Cargo Event, Bahrain www.aircargonews.net

February 20, 2008 – 14th Kellogg Technology Conference, Evanston, IL http://www.kellogg.northwestern.edu/techconference/


February 25-28, 2008 – NDIA 24th Annual Test & Evaluation Conference, Palm Springs, CA mgeary@ndia.org


February 27-28, 2008 – 48th Israel International Conference on Aerospace Sciences, Tel-Aviv, Israel iacas@aeerodyne.techion.ac.il


March

March 2-6, 2008 – IATA World Cargo Symposium, Rome, Italy http://www.iata.org/events/wcs08/index.htm

March 5-6, 2008 – Avionics 2008, Amsterdam, Netherlands http://www.avionics-event.com/


Upcoming Events Con’t


March 17-20, 2008 – NATA FBO Leadership Conference, Dallas, TX http://www.nata.aero/events/index.jsp

March 18-20, 2008 – PAMA Aviation Maintenance Symposium and Aviation Industry Exposition, Dallas, TX www.pama.org/

March 18-20, 2008 – Aviation Industry Expo, Dallas, TX www.aviationindustryexpo.com


March 26-27, 2008 – ACI-NA Air Cargo Symposium, Los Angeles, CA www.aci-na.org

March 31-April 2, 2008 – SAFE Europe 15th Annual Symposium www.safeeurope.com

April


April 8-11, 2008 - 8th International Symposium of the Australian Aviation Psychology Association, Sydney, Australia http://www.aavpasymposium.org

April 8-14, 2008 – Sun ‘n Fun, Lakeland, FL http://www.sun-n-fun.org/content/


April 14-17, 2008 – SAE World Congress, Detroit, MI http://www.sae.org/congress/


An Interview with Evan Byrne, NTSB

Past issues of the newsletter have featured interviews with influential individuals in the field of aviation. I am always looking for suggestions for who to interview next, so if there is someone that you think would make a good interviewee, please contact me at jbarrow1@gmu.edu.

Evan Byrne is a Human Performance Investigator in the Office of Aviation Safety at the National Transportation Safety Board. During his tenure at the board, he has served as the human performance investigator in more than a dozen major investigations. Prior to joining the NTSB, he was a research associate conducting NASA-sponsored research on cockpit automation at the Cognitive Science Laboratory at the Catholic University of Washington, DC. He earned his Ph.D. and M.A. at the University of Maryland – College Park in 1993 where he studied physiological measures of mental workload. He spoke at the NTSB panel in the Hospitality Suite at HFES 2007.

Q: What makes for a successful accident investigator? What training that you have had has helped you to become a successful accident investigator?

Diligence, diplomacy, and curiosity are traits that seem to work well. We’ve got to be diligent in our pursuit of information and in the rigor we apply to making sure what we’ve done is correct. We’ve got to be diplomatic, and most importantly, be ourselves and not bureaucrats, when working with the many professionals in the industry we come in contact with during an investigation, and also colleagues, friends, and family of people who were involved. Con’t on page 12
Evan Byrne, Con’t

We’ve also got to be curious, and constantly remember that you’re only as good as now, and assumptions are not actionable evidence when you’re trying to understand the human factors in an accident or incident.

Much of my training to become an investigator occurred through on-the-job training and being mentored by more experienced investigators. However, my background and academic training also brought critical skills to the table. For example, I’m an active general aviation pilot which helps keep me plugged into the national airspace system in a direct way. Also, the basic skills required for a good investigation and analysis are not too far off from the skills used in the successful pursuit of advanced degrees in human factors – for example the identification of research questions, creating test plans, the review and synthesis of background research, and the ability to draw meaningful conclusions based on the data you observe and their relationship to existing research findings.

Q: What projects are you working on right now?

I work on a variety of projects in which human factors support is needed. They include supporting general aviation accidents, domestic accidents and incidents involving commercial airlines, and foreign accidents that the NTSB is involved with. When I’m working an investigation from a human factors perspective my purpose is to help identify why human error occurred and how to prevent it. As a result, I don’t just look at human factors issues involving pilots but can find myself looking at maintenance technician performance, air traffic controllers, or even human factors at the organizational level.

Q: What do you find most rewarding about your current projects? What do you find most challenging?

One of the most rewarding aspects of this job is that I’m a member of a team that’s trying to improve aviation safety, a clearly defined goal which ultimately helps people. The work is also very tangible and visible so there’s satisfaction associated with having a short cycle time between your efforts and seeing the results or outcome of your efforts. The work can be challenging, especially as during the on-scene phase we can be working in a situation in which both families and company employees have just suffered a traumatic loss, and we’re working long hours to try to get as much information about the accident as possible to prevent its recurrence.

Q: In your opinion, what is the most important thing that human factors professionals bring to the aviation domain?

I think it is an appreciation for the fact that people can and will make errors, and do so even though they’re trained and motivated professionals. We help bring to light the influences on human behavior that may have set the stage for a particular error; and we help identify meaningful ways to prevent the error from happening in the future that incorporates what we know about human capabilities and limitations.

Q: What do you see as the greatest challenge to human factors professionals in the aviation domain?

Ensuring that we maintain our focus and stay operationally relevant. That is doing our best to bring our human factors tool set and perspective gained through our academic background and training and apply it to real-world problems that may not be as precisely defined, nor controlled, as questions in the laboratory. By operationally relevant I mean the need to stay current and knowledgeable about the aviation domain so we can maneuver within it from our human factors perspective, yet not binding ourselves up with unnecessary jargon when explaining what happened, or what needs to be done.
The Mystery Craft

Last Issue’s Craft

Congratulations to Steve Landry for being the first to correctly identify last issue’s mystery craft as Mil Mi-12 Homer! For those looking for more information, the Homer is the largest helicopter ever made, and flew for the first time in 1968. It was first introduced to the world at the 1971 Paris Airshow. Only 2 were ever built, and it set some load-carrying world records by lifting over 40 tons, a record which still stands today. It is generally believed that its purpose was to move ICBMs around the Soviet countryside. The Homer is wider than a Boeing 747 at 220 feet from rotor tip to rotor tip. Although the aircraft never made it to production, it is still a pretty amazing aircraft. Thanks again to Joseph McLaine for suggesting this craft!

This Issue’s Craft

Can you identify this issue’s Mystery Craft? E-mail Jane Barrow at jbarrow1@gmu.edu if you can - the first person to respond will be given credit in the next issue of the Flyer. We’re always interested in suggestions for the Mystery Craft - can you think of a particularly arcane aircraft? Wondering if your colleagues would be able to identify it? Please e-mail any suggestions to Jane Barrow at jbarrow1@gmu.edu.

Submitted by Randy Nelson